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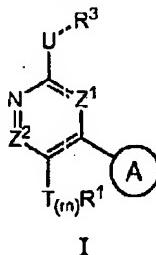
APR 11 2007

Applicants: Francois Maltais et al.  
Application No.: 10/798,766

**AMENDMENTS TO THE CLAIMS**

Please replace all prior versions and listings of claims with the amended claims as follows:

1. (Original) A compound of formula I:



or a pharmaceutically acceptable salt thereof, wherein:

Ring A is a pyrrole ring optionally substituted at the 1-position with R<sup>2</sup> and substituted with:

- (i) two R<sup>y</sup> groups, and
- (ii) QR<sup>2</sup>;

R<sup>2</sup> is R, C(O)R, C(O)OR, or SO<sub>2</sub>R;

each R<sup>y</sup> is independently selected from an optionally substituted C<sub>1-6</sub> aliphatic group, Ar, CN, NO<sub>2</sub>, halogen, N(R)<sub>2</sub>, SR, or OR, provided that both R<sup>y</sup> groups are not simultaneously Ar; Z<sup>1</sup> and Z<sup>2</sup> are each independently selected from N or CR<sup>x</sup>;

each R<sup>x</sup> is independently selected from R, halogen, CN, NO<sub>2</sub>, OR, SR, N(R)<sub>2</sub>, C(O)R, or CO<sub>2</sub>R;

U is selected from a valence bond, -O-, -S-, -N(R)-, or a C<sub>1-6</sub> alkylidene chain wherein up to two methylene units of U are optionally and independently replaced by -O-, -S-, -SO-, -SO<sub>2</sub>-, -N(R)SO<sub>2</sub>-, -SO<sub>2</sub>N(R)-, -N(R)-, -CO-, -CO<sub>2</sub>-, -N(R)CO-, -N(R)C(O)O-, -N(R)CON(R)-, -N(R)SO<sub>2</sub>N(R)-, -N(R)N(R)-, -C(O)N(R)-, or -OC(O)N(R)-;

T is a valence bond or a C<sub>1-6</sub> alkylidene chain;

m is zero or one;

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R<sup>1</sup> is selected from CN, halogen, OR<sup>6</sup>, SR<sup>6</sup>, N(R)R<sup>6</sup>, or R<sup>4</sup>;

Q is selected from a valence bond, -C(O)N(R)-, -SO<sub>2</sub>N(R)-, -SO<sub>2</sub>-, -N(R)C(O)N(R)-, -N(R)C(O)-, -N(R)SO<sub>2</sub>-, -N(R)SO<sub>2</sub>N(R)-, -N(R)C(O)O-, -C(O)-, or -C(O)O-;

R<sup>2</sup> is selected from halogen, CN, (CH<sub>2</sub>)<sub>y</sub>R<sup>5</sup>, (CH<sub>2</sub>)<sub>y</sub>CH(R<sup>5</sup>)<sub>2</sub>, (CH<sub>2</sub>)<sub>y</sub>CH(R<sup>7</sup>)CH(R<sup>5</sup>)<sub>2</sub>, (CH<sub>2</sub>)<sub>y</sub>N(R<sup>4</sup>)<sub>2</sub>, or N(R<sup>4</sup>)(CH<sub>2</sub>)<sub>y</sub>N(R<sup>4</sup>)<sub>2</sub>;

y is 0-6;

each Ar is independently selected from an optionally substituted 3-7 membered saturated, partially unsaturated, or fully unsaturated monocyclic ring having 0-4 heteroatoms independently selected from nitrogen, oxygen, or sulfur, or an optionally substituted 8-10 membered saturated, partially unsaturated, or fully unsaturated bicyclic ring having 0-4 heteroatoms independently selected from nitrogen, oxygen, or sulfur;

R<sup>3</sup> is selected from R, Ar, (CH<sub>2</sub>)<sub>y</sub>CH(R<sup>7</sup>)R<sup>5</sup>, CN, (CH<sub>2</sub>)<sub>y</sub>CH(R<sup>7</sup>)CH(R<sup>5</sup>)<sub>2</sub>, or (CH<sub>2</sub>)<sub>y</sub>CH(R<sup>7</sup>)N(R<sup>4</sup>)<sub>2</sub>;

each R is independently selected from hydrogen or an optionally substituted C<sub>1-6</sub> aliphatic group, or:

two R on the same nitrogen atom are taken together with the nitrogen atom attached thereto to form a 4-8 membered saturated, partially unsaturated, or fully unsaturated ring having 1-4 heteroatoms independently selected from nitrogen, oxygen, or sulfur;

each R<sup>4</sup> is independently selected from R<sup>6</sup>, C(O)R<sup>6</sup>, CO<sub>2</sub>R<sup>6</sup>, CON(R<sup>6</sup>)<sub>2</sub>, SO<sub>2</sub>R<sup>6</sup>;

each R<sup>5</sup> is independently selected from R<sup>6</sup>, OR<sup>6</sup>, CO<sub>2</sub>R<sup>6</sup>, (CH<sub>2</sub>)<sub>y</sub>N(R<sup>4</sup>)<sub>2</sub>, N(R<sup>4</sup>)<sub>2</sub>, N(R)C(O)R<sup>6</sup>, N(R)CON(R<sup>6</sup>)<sub>2</sub>, CON(R<sup>6</sup>)<sub>2</sub>, SO<sub>2</sub>R<sup>6</sup>, N(R)SO<sub>2</sub>R<sup>6</sup>, C(O)R<sup>6</sup>, CN, or SO<sub>2</sub>N(R<sup>6</sup>)<sub>2</sub>;

each R<sup>6</sup> is independently selected from R or Ar;

R<sup>7</sup> is selected from R<sup>6</sup>, (CH<sub>2</sub>)<sub>w</sub>OR<sup>6</sup>, (CH<sub>2</sub>)<sub>w</sub>N(R<sup>4</sup>)<sub>2</sub>, or (CH<sub>2</sub>)<sub>w</sub>SR<sup>6</sup>; and

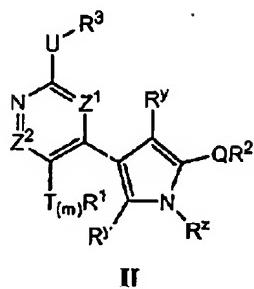
each w is independently selected from 0-4;

provided that:

when R<sup>1</sup> is hydrogen, U is -NH-, and R<sup>3</sup> is an optionally substituted phenyl ring, then Q is other than a valence bond.

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2. (Original) The compound according to claim 1, wherein said compound is of formula II:



or a pharmaceutically acceptable salt thereof.

3. (Original) The compound according to claim 2, wherein:

R<sup>1</sup> is selected from hydrogen, N(R<sup>4</sup>)<sub>2</sub>, OR<sup>6</sup>, 3-6 membered carbocyclic; or an optionally substituted group selected from C<sub>1-6</sub> aliphatic or a 5-6 membered aryl ring having 0-4 heteroatoms independently selected from nitrogen, oxygen, or sulfur;

R<sup>2</sup> is selected from (CH<sub>2</sub>)<sub>y</sub>R<sup>5</sup>, (CH<sub>2</sub>)<sub>y</sub>CH(R<sup>5</sup>)<sub>2</sub>, (CH<sub>2</sub>)<sub>y</sub>CH(R<sup>7</sup>)CH(R<sup>5</sup>)<sub>2</sub>, or (CH<sub>2</sub>)<sub>y</sub>N(R<sup>4</sup>)<sub>2</sub>;

R<sup>3</sup> is selected from hydrogen, CH(R<sup>7</sup>)R<sup>5</sup>, 3-7 membered carbocyclic or an optionally substituted group selected from C<sub>1-4</sub> aliphatic, a 3-6 membered heterocyclic ring having 1-3 heteroatoms independently selected from nitrogen, oxygen, or sulfur, or a 5-6 membered aryl or heteroaryl ring having 1-3 heteroatoms independently selected from nitrogen, oxygen, or sulfur; and

U is selected from a valence bond, -CH<sub>2</sub>- , -O-, -NR-, -NHCO-, or -NHCO<sub>2</sub>-.

4. (Original) The compound according to claim 3, wherein R<sup>2</sup> is (CH<sub>2</sub>)<sub>y</sub>R<sup>5</sup>, (CH<sub>2</sub>)<sub>y</sub>CH(R<sup>5</sup>)<sub>2</sub>, or (CH<sub>2</sub>)<sub>y</sub>CH(R<sup>7</sup>)CH(R<sup>5</sup>)<sub>2</sub>.

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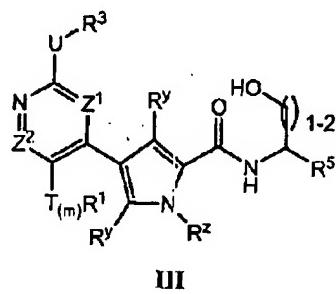
5. (Original) The compound according to claim 3, wherein Q is -C(O)N(R)- or -C(O)O-.

6. (Original) The compound according to claim 2, wherein R<sup>3</sup> is 3-7 membered carbocyclyl or an optionally substituted group selected from C<sub>1-4</sub> aliphatic, a 3-6 membered heterocyclic ring having 1-3 heteroatoms independently selected from nitrogen, oxygen, or sulfur, or a 5-6 membered aryl or heteroaryl ring having 1-3 heteroatoms independently selected from nitrogen, oxygen, or sulfur.

7. (Original) The compound according to claim 2, wherein R<sup>3</sup> is CH(R<sup>7</sup>)R<sup>5</sup>.

8. (Original) The compound according to claim 2, wherein R<sup>3</sup> is a 3-6 membered heterocyclic ring having 1-3 heteroatoms independently selected from nitrogen, oxygen, or sulfur.

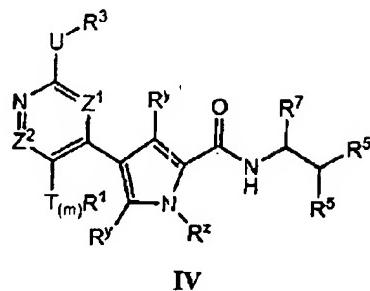
9. (Original) The compound according to claim 1, wherein said compound has the formula III:



or a pharmaceutically acceptable salt thereof.

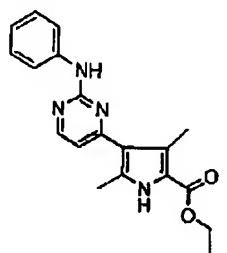
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10. (Original) The compound according to claim 1, wherein said compound has the formula IV:

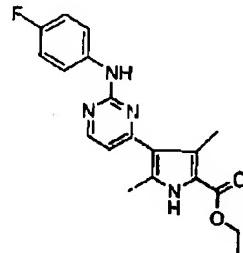


or a pharmaceutically acceptable salt thereof.

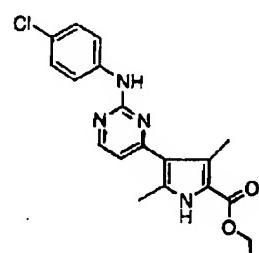
11. (Original) The compound according to claim 1, wherein said compound is selected from the group consisting of:



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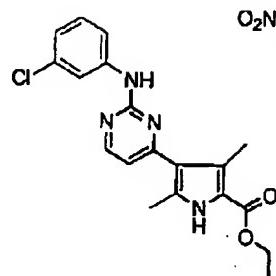


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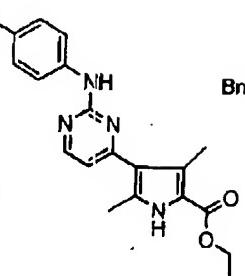


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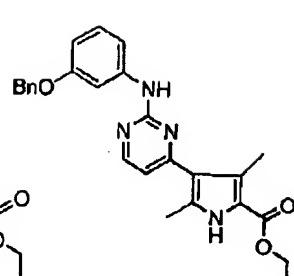
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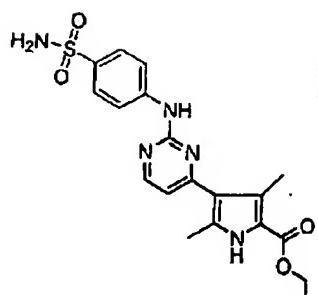
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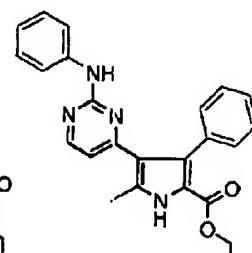
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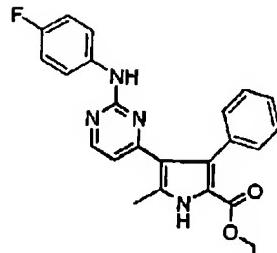
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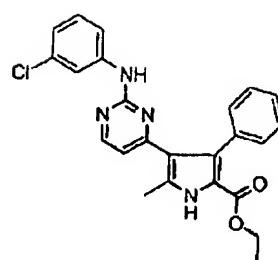
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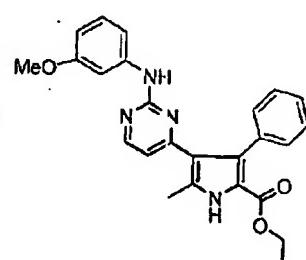
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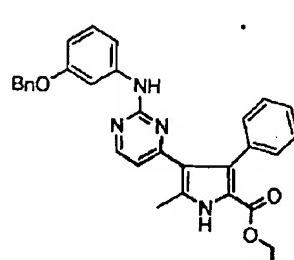
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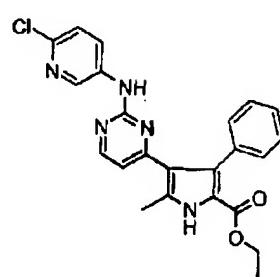


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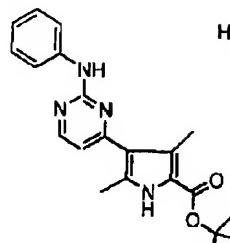


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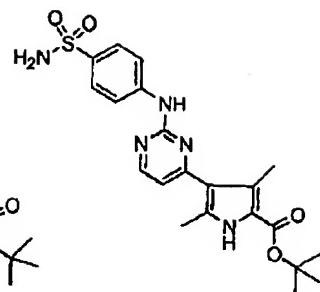
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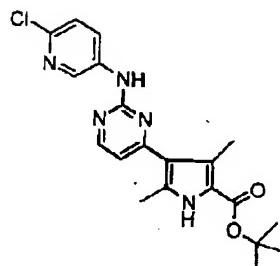
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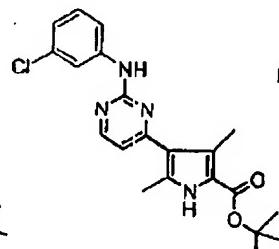
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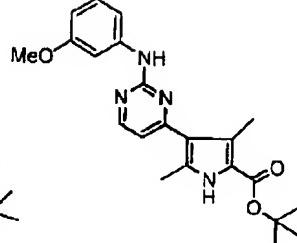
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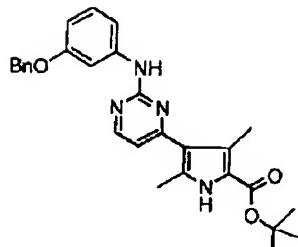
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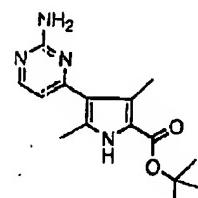
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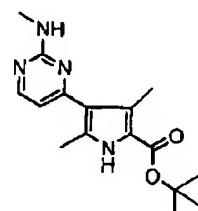
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I-19

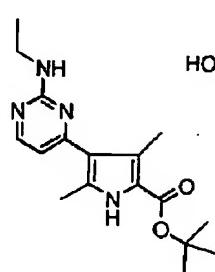


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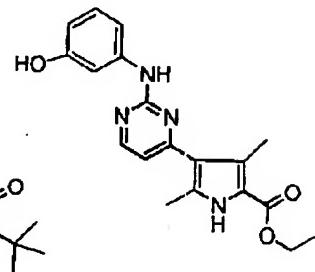


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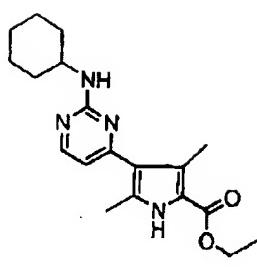
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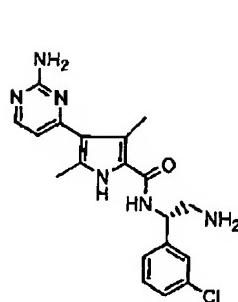
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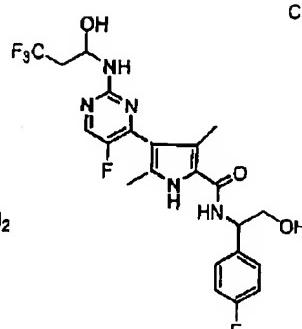
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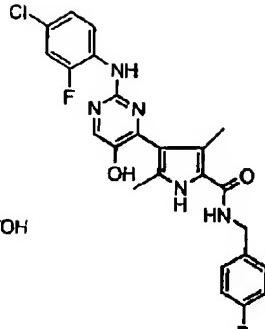
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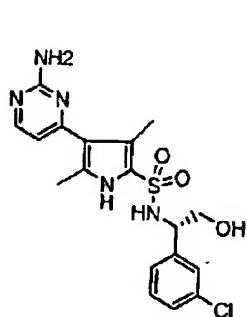
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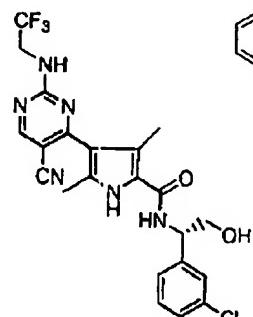
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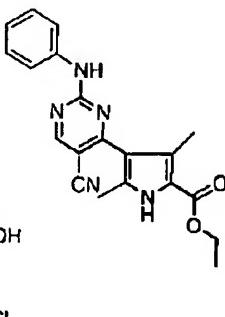
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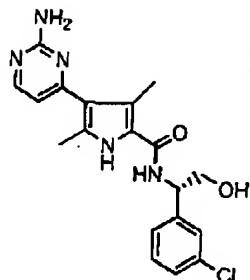


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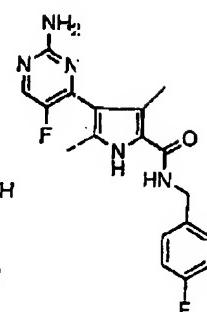


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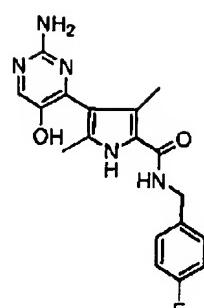
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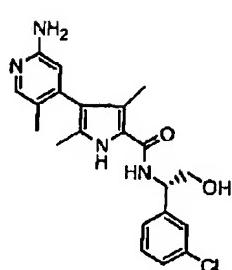
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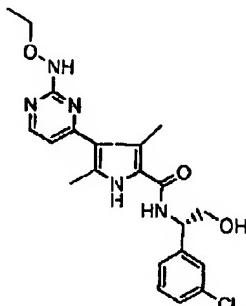
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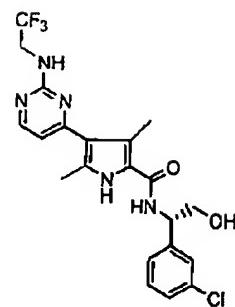
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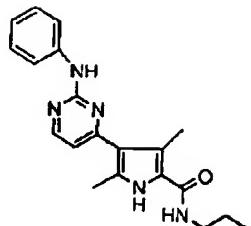
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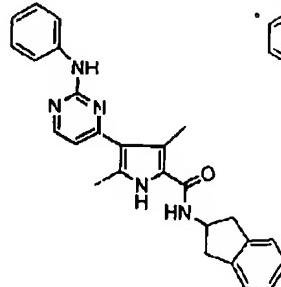
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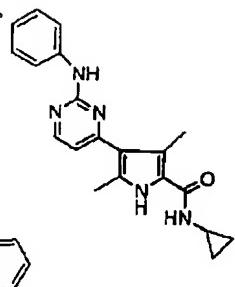
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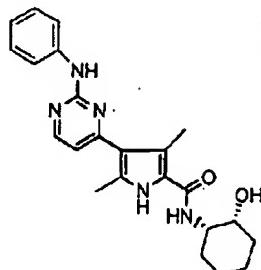


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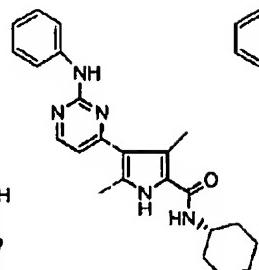


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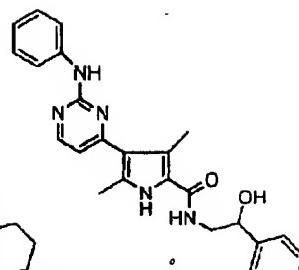
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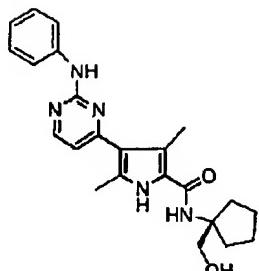
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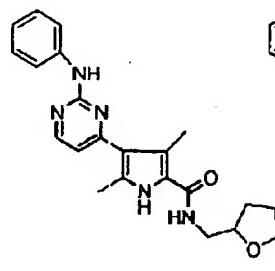
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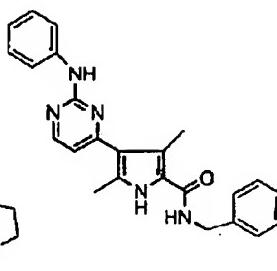
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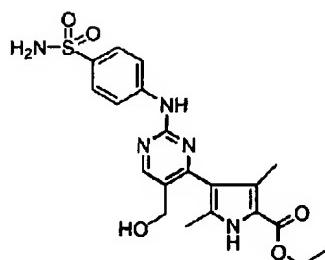
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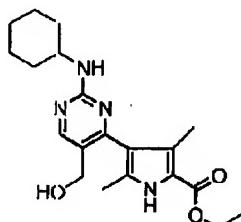
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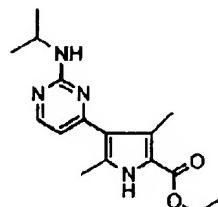
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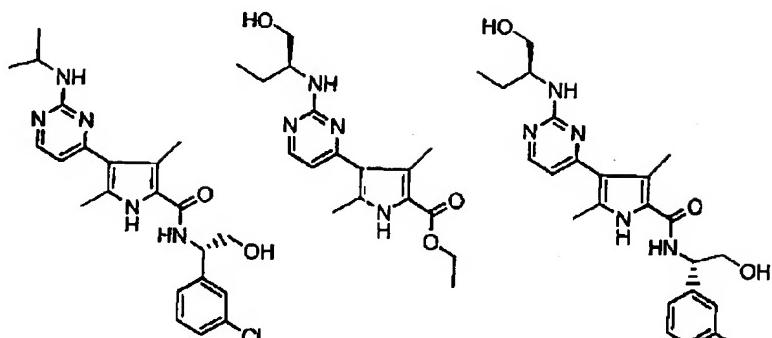


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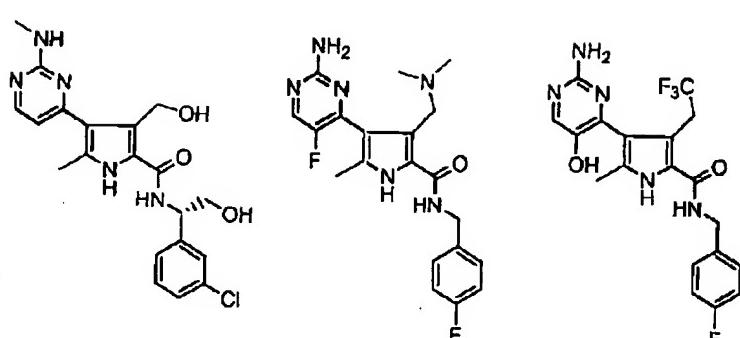
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I-50

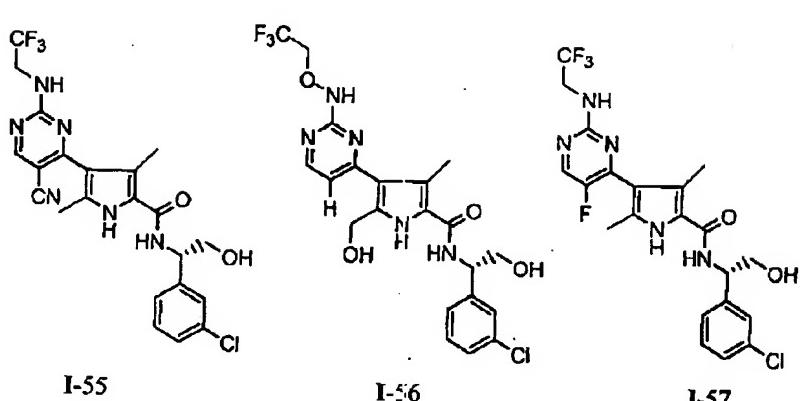
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I-52

I-53

I-54

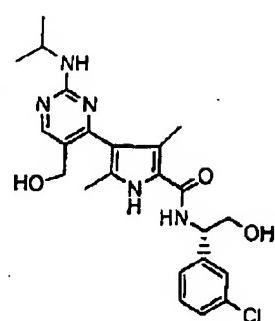


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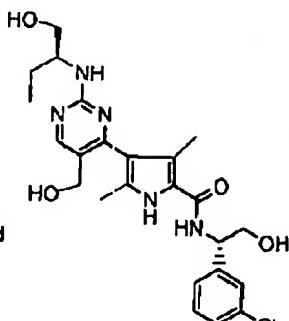
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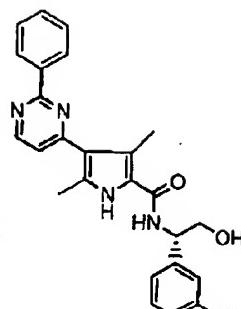
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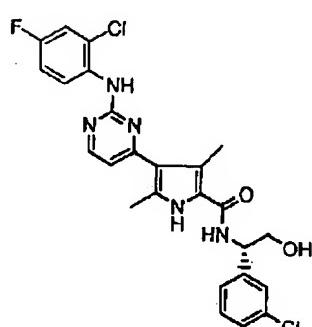
I-58



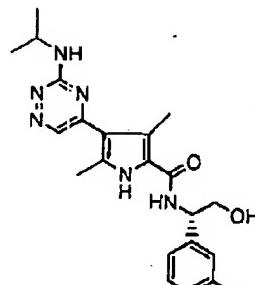
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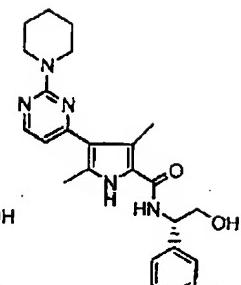
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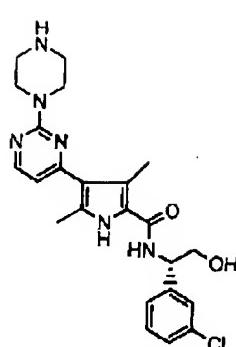
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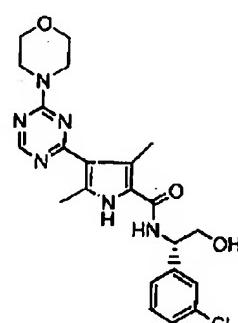
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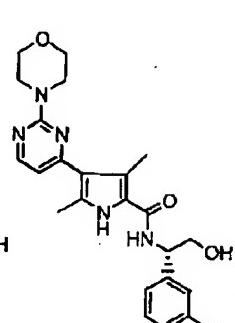
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I-64

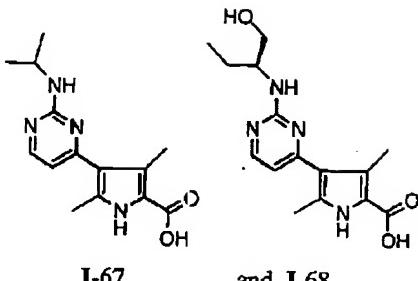


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12. (Original) A composition comprising an effective amount of a compound according to claim 1, and a pharmaceutically acceptable carrier, adjuvant, or vehicle.

13. (Canceled).

14. (Currently amended) The composition of claim 12, additionally comprising a therapeutic agent selected from a chemotherapeutic or anti-proliferative agent selected from mechlorethamine, chlorambucil, cyclophosphamide, melphalan, ifosfamide, methotrexate, 6-mercaptopurine, 5-fluorouracil, cytarabine, gancitabine, vinblastine, vincristine, vinorelbine, paclitaxel, etoposide, irinotecan, topotecan, doxorubicin, bleomycin, mitomycin, carmustine, lomustine, cisplatin, carboplatin, asparaginase, tamoxifen, leuprorelin, flutamide, megestrol, imatinib (Gleevec™), Adriamycin, dexamethasone, or cyclophosphamide, an anti-inflammatory agent, an immunomodulatory or immuno-suppressive agent, an agent for treating a neurological disorder, an agent for treating cardiovascular disease, an agent for treating destructive bone disorders, an agent for treating liver disease, an anti-viral agent, an agent for treating blood disorders, an agent for treating diabetes, or an agent for treating immunodeficiency disorders.

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15. (Withdrawn, currently amended) A method of inhibiting ERK2, JNK3, SRC, Aurora2, or GSK3 protein kinase activity in a biological sample selected from a cell culture, saliva, urine, feces, semen, tears, or an extract thereof, which method comprises contacting said biological sample in vitro with:

- a) a composition according to claim 12; or
- b) a compound according to claim 1.

16. (Canceled).

17. (Withdrawn, currently amended) A method of treating or lessening the severity of a disease, condition or disorder, in a patient in need thereof, selected from a proliferative disorder selected from breast cancer, colon cancer, kidney carcinoma, lung cancer, melanoma, ovarian cancer, pancreatic cancer, or prostate cancer, a cardiac disorder, a neurodegenerative disorder, an autoimmune disorder, a condition associated with organ transplant, an inflammatory disorder, an immunologically mediated disorder, or a bone disorder, comprising the step of administering to said patient:

- a) a composition according to claim 12; or
- b) a compound according to claim 1.

18. (Withdrawn, currently amended) The method according to claim 17, comprising the additional step of administering to said patient an additional therapeutic agent selected from a chemotherapeutic or anti-proliferative agent selected from mechlorethamine, chlorambucil, cyclophosphamide, melphalan, ifosfamide, methotrexate, 6-mercaptopurine, 5-fluorouracil, cytarabine, gemcitabine, vinblastine, vincristine, vinorelbine, paclitaxel, etoposide, irinotecan, topotecan, doxorubicin, bleomycin, mitomycin, carmustine, lomustine, cisplatin, carboplatin, asparaginase, tamoxifen, leuprolide, flutamide, megestrol, imatinib (Gleevec<sup>TM</sup>), adriamycin, dexamethasone, or cyclophosphamide, an anti-inflammatory agent,

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~~an immunomodulatory or immune suppressive agent, a neurotrophic factor, an agent for treating cardiovascular disease, an agent for treating destructive bone disorders, an agent for treating liver disease, an anti-viral agent, an agent for treating blood disorders, an agent for treating diabetes, or an agent for treating immunodeficiency disorders, wherein:~~

- (a) ~~said additional therapeutic agent is appropriate for the disease being treated; and~~
- (b) ~~said additional therapeutic agent is administered together with said composition as a single dosage form or separately from said composition as part of a multiple dosage form.~~

19-29. (Cancelled)